IN THE CLAIMS

1 – 39. (Cancelled)

40. (Currently Amended) A process for treating a fluorine compound-containing gas, comprising:

contacting a gas stream containing at least one compound consisting of (a) carbon and fluorine, (b) carbon, hydrogen and fluorine, (c) carbon, hydrogen, oxygen and fluorine, (d) SF_6, and (e) NF_3, wherein the concentration of the fluorine compound is 0.5 to 10% by volume, with a catalyst comprising alumina as an active compound and 7.2 to 49.4 wt.% of nickel oxide, said catalyst containing a composite oxide of aluminum and nickel;

adding steam or a reaction gas containing steam and oxygen to the gas stream; and

effecting a hydrolysis reaction between the at least one compound and the steam, thereby producing a treated gas containing hydrogen fluoride.

41. (Previously Presented) A process according to Claim 40, further comprising washing the treated gas with water to remove the hydrogen fluoride.

42. (Previously Presented) A process according to Claim 40, further comprising washing the treated gas with an alkaline solution or slurry to neutralize the hydrogen fluoride and other acidic compounds.

43. (Previously Presented) A process according to Claim 40, further comprising washing the treated gas with water and subsequently neutralizing

the water that has absorbed the hydrogen fluoride with an alkaline solution or slurry.

44. (Currently Amended) A process according to Claim 40, wherein the catalyst further comprises ~~7.2 to 61.3% by weight of~~ zinc oxide, and wherein a ratio of aluminum to a total of nickel and zinc is 50 to 99: 50 to 1 by atom.

45. (Previously Presented) A process according to Claim 40, wherein the catalyst consists essentially of alumina and nickel oxide and a composite oxide of aluminum and nickel.

46. (Previously Presented) A process according to Claim 40, wherein the at least one compound is at least one compound selected from the group consisting of CF_4, C_2F_6, C_3F_8, C_4F_8, C_5F_8, CHF_3, CH_2F_2, CH_3F, C_2HF_5, $C_2H_2F_4$, $C_2H_3F_3$, $C_2H_4F_2$, C_2H_5F, CH_2OCF_2, SF_6, and NF_3.

47. (Previously Presented) A process according to Claim 40, wherein the at least one compound is at least one compound selected from the group consisting of CF_4, C_2F_6, C_3F_8, C_4F_8, C_5F_8, CHF_3, CH_2F_2, CH_3F, C_2HF_5, $C_2H_2F_4$, $C_2H_3F_3$, $C_2H_4F_2$, C_2H_5F, SF_6, and NF_3.

48. (Currently Amended) A method of treating a gas containing a perfluoro-compound, comprising:

contacting the gas containing a fluorine compound in a concentration of 0.5 to 10% by volume at a temperature of 400 to 800°C with a catalyst comprising aluminum oxide as an active component and 7.2 to 49.4 wt.% of nickel oxide, said catalyst containing a composite oxide of aluminum and nickel, in the presence of steam, whereby the perfluoro-compound is decomposed by hydrolysis to produce a treated gas containing hydrogen fluoride and acidic compounds; and

contacting the treated gas with water to absorb the hydrogen fluoride and the acidic compounds from the treated gas.

49. (Previously Presented) A process according to Claim 48, wherein the perfluoro compound is at least one compound selected from the group consisting of CF_4, CHF_3, C_2F_6, C_3F_8, C_4F_8, SF_6 and NF_3.

50. (Previously Presented) A process according to Claim 48, wherein the catalyst further comprises zinc oxide, the balance being aluminum oxide.

51. (Previously Presented) A process according to Claim 48, wherein the catalyst consists essentially of alumina and nickel oxide and composite oxide of aluminum and nickel.

52 – 74. (Cancelled)

75. (Withdrawn) A process according to claim 40, wherein the compound in the gas stream is SF_6.

76. (Withdrawn) A process according to claim 40, wherein the compound in the gas stream is carbon, fluorine and hydrogen.

77. (Withdrawn) A process according to claim 40, wherein the compound in the gas stream is NF_3.

78. (Withdrawn) A process according to claim 40, wherein the compound in the gas stream is at least one member selected from the group

consisting of CHF_3, CH_2F_2, CH_3F, C_2HF_5, $C_2H_2F_4$, $C_2H_3F_3$, $C_2H_4F_2$, C_2H_5F, CH_2OCF_2, SF_6 and NF_3.

79. (Previously Presented) A process according to claim 40, wherein the fluorine compound-containing gas to be treated is used as etchants or cleaners for semiconductors.